

1 The opinion in support of the decision being entered today was *not* written  
2 for publication and is *not* binding precedent of the Board.  
3

4  
5 UNITED STATES PATENT AND TRADEMARK OFFICE  
6

7  
8 BEFORE THE BOARD OF PATENT APPEALS  
9 AND INTERFERENCES  
10

11  
12 *Ex parte* RISTO PEKKA ANTERO NOKELAINEN  
13

14  
15 Appeal No. 2006-1956  
16 Application No. 09/935,917  
17 Technology Center 3700  
18

19  
20 Decided: February 27, 2007  
21

22  
23 Before MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and  
24 ROBERT E. NAPPI, *Administrative Patent Judges*.  
25

26 BAHR, *Administrative Patent Judge*.  
27  
28

29 DECISION ON APPEAL  
30

31 STATEMENT OF THE CASE

32 Risto Pekka Antero Nokelainen (Appellant) appeals under 35 U.S.C.  
33 § 134 from the Examiner's decision rejecting claims 1, 2, 11, 14, 15, 17, 22,  
34 23, 27, 28, 30, and 35-38. Claims 3-10, 12, 13, 16, 18-21, 24-26, 29, and  
35 31-34 have been withdrawn from consideration. We have jurisdiction over  
36 this appeal under 35 U.S.C. § 6.

*The Invention*

Appellant's invention is an apparatus and method for selectively perforating sheets as a group of sheets moves successively through the perforator. The invention is particularly advantageous for applications in which only specific pages of printout letters with many pages require perforation. A single type of paper can be used for the entire print job, while only the desired sheets are perforated (Specification 2).

Claim 27 is illustrative of the claimed invention and reads as follows:

27. A system for selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device, the perforating device including a first perforating tool for perforating paper and a control unit for controlling the perforating tool, wherein the first perforating tool perforates the paper along a direction of the movement of the sheets, the system comprising:

means for successively receiving a plurality of sheets of paper as input to the perforating device; and

means for positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass unperforated, including:

means for receiving at the control unit as the group of sheets moves through the perforation device, for at least a first sheet, a first control signal based on information specific to the first sheet;

1 means for sending, based on the first control  
2 signal, a second control signal from the control unit  
3 to the first perforating tool, to cause the first  
4 perforating tool to assume the perforating position;  
5 and

6 means for actuating, in response to receiving  
7 the control signal from the control unit, the first  
8 perforating tool to assume the perforating position  
9 while the first sheet passes.  
10

### 11 *The Evidence*

12 The Examiner relies upon the following as evidence of unpatentability:

13 Hayamizu	4,721,058	Jan. 26, 1988
14 Moll	5,334,126	Aug. 02, 1994
15 Carter	5,787,780	Aug. 04, 1998

16

### 17 *The Rejection*

18 Appellant originally appealed from the Examiner's rejection of claims  
19 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30, and 35-38 under 35 U.S.C. § 103(a) as  
20 being unpatentable over Hayamizu in view of Moll. In the Answer (mailed  
21 November 22, 2005), the Examiner re-stated the rejection as being based on  
22 Hayamizu in view of Moll and Carter. The Examiner offers two alternative  
23 theories for the rejection. Under the first theory, the Examiner proposes  
24 modification of Moll in view of Hayamizu. Under the second theory, the  
25 Examiner proposes modification of Hayamizu in view of Moll. The  
26 Examiner states that "[t]he Carter reference does not structural [*sic.*]  
27 contribute to the rejection, but factually establishes the level of ordinary skill

1 in the art, and is brought into this rejection in support of the Examiner's  
2 taking of Official Notice" (Answer 3). The Examiner indicates that the  
3 Carter reference was cited in response to Appellant's request (Br. 9) that the  
4 Examiner provide a reference to substantiate the Examiner's official notice  
5 with regard to the use of perforation and non-perforation blades in the same  
6 machine (Answer 3).

7  
8 FINDINGS OF FACT

9 Hayamizu discloses a paper cutting unit provided with a Y-axis cutter  
10 for cutting roll type paper 5 in the direction normal to the paper travel  
11 direction and an X-axis cutter for cutting the paper in a direction parallel to  
12 the paper travel direction. The paper is marked with bar codes constituting  
13 discriminating signals 7, which are read by discriminating signal detectors  
14 20. A paper cutting control unit 12 uses these signals as instructions to select  
15 a paper cutting mode (col. 4, ll. 3-10). The paper cutting means 9 cuts the  
16 paper, on the basis of the instructions, first in the Y-axis direction and  
17 thereafter in the X-axis direction (col. 4, ll. 27-38).

18 Hayamizu's paper cutters cut the paper continuously across the paper  
19 along the Y-axis or X-axis (col. 3, ll. 32-37).

20 Moll discloses a perforation apparatus wherein successively fed sheets  
21 are automatically perforated in a pattern pre-programmed by the user. The  
22 user programs the pattern of perforations by setting three switches. Switch  
23 SWI sets the delay in inches from the edge of a sheet 30 being detected to the

1 start of a line of perforations. Switch SWII sets the distance in inches (time)  
2 from the start to the stop of a line of perforations. Switch SWIII sets the  
3 overall size of the full length of the sheet 30 from the time it is detected  
4 through its full length, so the apparatus only cycles once per sheet (col. 4, ll.  
5 15-24). A sheet detector 41 is provided to detect the edge of a sheet fed into  
6 the device.

7 Moll emphasizes the desirability of a perforating apparatus which  
8 provides a line of perforations on a sheet of paper at locations and of lengths  
9 that can be varied easily (col. 2, ll. 13-19 and 43-46).

10 The Examiner's first theory of unpatentability is that it would have  
11 been obvious to have modified Moll by providing a bar code reader and bar  
12 codes on all sheets, as taught by Hayamizu, to automate the process of setting  
13 when the perforator is activated, thus reducing the work of the operator  
14 (Answer 5).

15 The Examiner's second theory of unpatentability is that it would have  
16 been obvious to have modified Hayamizu by making the blades perforating  
17 blades, as taught by Moll, in order to keep all the products (drawing sheets)  
18 together for later disassembling (Answer 5-6).

19 Carter discloses a copying machine 5 provided with a top adjustable  
20 slit/perforator 50 for on-line slitting and perforating of copy sheets as the  
21 sheets are fed to top output tray 44 (col. 2, ll. 44-47). The slit/perforator  
22 unit is adjustable while paper is moving through it to permit different  
23 positioning of the slit and/or perforator housings (col. 2, ll. 57-61). In

1 other words, Carter's slitter/perforator permits the user to select sheets to be  
2 slit and/or perforated while the sheets are moving through the machine.

3  
4 ANALYSIS

5 The first issue before us is whether it would have been obvious to  
6 combine the references as proposed by the Examiner. If such combination  
7 would have been obvious, the second issue is whether the combination would  
8 result in the subject matter of Appellant's claims, in particular, a method or  
9 perforator for selecting sheets of a group for perforation as the group is  
10 successively moving through a perforation device.

11 Moll and Hayamizu disclose two different types of paper cutting.  
12 Moll cuts in the sense of perforating while Hayamizu cuts in the sense of  
13 severing. Nevertheless, Moll and Hayamizu both disclose apparatus and  
14 methods for cutting paper in pre-programmed customized patterns that can be  
15 varied using a single apparatus. In Moll, the user programs the apparatus by  
16 inputting the distance from the edge of the paper at which the perforation is  
17 to begin, the length of the line of perforation and the overall length of the  
18 sheet. In Hayamizu, on the other hand, the pattern for cutting is programmed  
19 onto the paper itself, in the form of bar codes 7 that contain instructions for  
20 the cutting apparatus.

21 Appellant points out differences between Moll and Hayamizu. As  
22 noted above, Moll perforates while Hayamizu severs. Moll processes sheets  
23 while Hayamizu processes roll type paper (Reply 3). In light of these

1 differences, Appellant argues that one of skill in the art would not have  
2 looked to the disparate system of Hayamizu to modify Moll. *Id.*

3 We fully appreciate the differences between Moll and Hayamizu. We  
4 note, however, that Hayamizu's X-axis cutter actually cuts a severed sheet,  
5 such sheet having first been severed from the roll paper by the Y-axis cutter.  
6 Further, Carter evidences that perforators and severing type cutters (slitters)  
7 are sufficiently related as to be considered together in the art and further  
8 evidences an art-recognized desire to selectively slit or perforate sheets with  
9 a minimum of operator involvement, skill or adjustments (col. 1, ll. 11-24).

10 We therefore conclude that the differences between Moll and Hayamizu are  
11 not of such a nature that one of ordinary skill in the art would have  
12 overlooked or been dissuaded from applying the teachings of one apparatus  
13 on the other.

14 It would have been obvious to one of ordinary skill in the art to modify  
15 the Moll perforation apparatus by replacing the manually-set switch system  
16 with a programming system of the type taught by Hayamizu wherein bar  
17 codes 7 are printed onto the sheets to convey instructions, read by  
18 discriminating signal detectors 20, to control the perforator to form a desired  
19 pattern of perforations on the sheets. The motivation for the modification is  
20 to permit variability in the perforation patterns from one sheet to another with  
21 a minimum of operator involvement or adjustments.

22 Having concluded that it would have been obvious to combine the  
23 references as proposed in the Examiner's first theory of unpatentability, we

1 now address the issue of whether the combination results in the subject  
2 matter of Appellant's claims, in particular, a method or perforator for  
3 selecting sheets of a group for perforation as the group is successively  
4 moving through a perforation device. The Moll perforation apparatus, as  
5 modified to provide bar codes or other discriminating signals on the sheets  
6 and readers to read the instructions in the codes to control the perforator unit,  
7 selects sheets of a group or batch for perforation, based on the information in  
8 the codes printed on each sheet, as the group or batch of sheets is  
9 successively moving through Moll's perforation apparatus. We thus  
10 conclude that the references, when combined in accordance with the  
11 Examiner's first theory of unpatentability, results in the subject matter of  
12 Appellant's independent claims 1, 11, 14, and 27 and, in particular, the  
13 selecting feature alleged by Appellant to be lacking.<sup>1</sup> Therefore, the  
14 Examiner's rejection of independent claims 1, 11, 14, and 27, as well as  
15 dependent claims 2, 15, 17, 22, 23, 28, 30, and 35-38 which Appellant has  
16 not separately argued, is sustained.

---

<sup>1</sup> It is therefore unnecessary for us to address the Examiner's second theory of unpatentability.



SUMMARY

The decision of the Examiner to reject claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30, and 35-38 is AFFIRMED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a). *See* 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

vsh

WOLF GREENFIELD & SACKS, PC  
FEDERAL RESERVE PLAZA  
600 ATLANTIC AVENUE  
BOSTON, MA 02210-2206